DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on March 1, 2011has been entered. Claims 1 and 5 have been amended. No claims have been added. Claims 1and 5-15 are still pending in this application, with claims 1 and 10 being independent.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over MACHIDA ET AL. (US 2001/0026290, hereinafter MACHIDA) in view of YOSHINO ET AL. (US 4,944,031, hereinafter YOSHINO).**

5. **Regarding claim 1**, MACHIDA discloses a display device of an electronic apparatus for setting a plurality of conditions for a process of the electronic apparatus through an input operation while displaying the conditions before the

electronic apparatus performs the process in accordance with the conditions *(The operating device is constructed to have a display device 1 for displaying a setting frame to operate a setting menu, a frame for a processing operation, etc., an input device 3 for operating a setting menu or instructing other operations while referring to the display content of the setting menu thus displayed or the like, and a menu operating controller 40 for controlling the menu operation using the above units; PARAGRAPH [0058].)*, the device comprising:

6. determining means *(CPU 4; FIG. 2.)* for determining whether or not each of the conditions has not yet been set *(FIG. 2 is a block diagram showing a hardware configuration used for the menu operating device shown in FIG. 1. The hardware control functions of the respective parts of the menu operating device and the software control functions such as menu display and operation based on the menu operating controller 40 are carried out by CPU 4; PARAGRAPH [0064]. The display controller 41 refers to menu data stored in a menu data storage unit 46 to create the setting frame corresponding to each setting menu, display frames for processing operations, etc. The menu data contain information on the setting item name (parameter name) of each setting menu, the hierarchical structure of the menu, the constructing method of each frame, and character data and image data required to create the setting frames, etc. The setting controller 42 sets parameters for setting items in each setting menu by referring to the parameter data stored in the parameter data storage unit 47 if occasion demands. Further, the setting controller 42 may make an instruction to the display controller 41 about a setting menu to be next operated and a setting frame to be next displayed on the basis of the result of setting parameters. The parameter data contain information on the initial values of the parameters or data of default values. However, these parameter data are not necessarily*

required to be referred to if the setting can be performed on the basis of only the parameter values input from the touch panel 3a (input device 3).; PARAGRAPHS [0061]-[0062].); and

7. display control means *(DISPLAY CONTROLLER 41; FIG. 1)* for displaying notifying information indicating to what degree conditions remain to be set *(The menu operating controller 40 includes a display controller 41 for sequentially creating setting frames or other display frames (a processing start frame, a processing executing frame, a processing end frame, etc. as described later) and displaying these frames on the screen 10 of the display device 1, and a setting controller 42 for performing setting of parameters, etc. on the basis of the parameter values input from the touch panel 3a serving as the input device 3 and other operating instruction information; PARAGRAPH [0060]. In the operating method according to an aspect of the present invention, the operating device according to another aspect of the present invention and the image processing apparatus according to another aspect of the present invention, the setting on plural items is sequentially carried out in predetermined order, and the plural items are displayed when one of plural setting frames is displayed, whereby an operator can obtain information as to the place at which the setting frame being displayed is located in the arrangement of the plural items to be sequentially set. Therefore, the operability can be enhanced; PARAGRAPH [0185]. In the operating method according to another aspect of the present invention and the operating device according to another aspect of the present invention, the items which have been already set, the items which are being set and the items which have not yet been set are displayed to be distinguishable from one another, so that these items can be discriminated from one another; PARAGRAPH [0186])*,

8. wherein the notifying information is the number of conditions which have not yet been set *(The hierarchical menu of this embodiment is used to set parameters of plural setting items*

on the processing type and operating condition of a copying operation which is a predetermined processing operation, and it is constructed by five setting menus of (1) a copy job type setting menu, (2) a sheet size setting menu, (3) a magnification setting menu, (4) a number-of-copies setting menu and (5) other setting menus. These setting menus constitute the hierarchical menu for sequentially setting the parameters for the respective setting items by the hierarchical structure which is constructed ***in order from (1) to (5)****. The setting menu (1) is used for the processing type, and the setting menus (2) to (5) are used to set the operation conditions. This hierarchical menu is not designed in such a tree structure that the operating flow of setting menus is branched; PARAGRAPHS [0081]-[0082]. In the hierarchical menu display area 115 is displayed a list of five menu item buttons 116_1 to 116_5 corresponding to the setting menus of the five layers which contain the type setting menu displayed in the setting menu display area 110 in the type setting frame 11. The setting item names "copy job type", "sheet size", "magnification", "number-of-copies" and "other settings" corresponding to the respective setting menus are displayed to indicate the association with the setting menus of the five layers on the menu item buttons 116_1 to 116_5. These five menu item buttons 116_1 to 116_5 are arranged from the upper side to the lower side of the frame in this order. At this time, the menu item buttons 116_1 to 116_5 are displayed in such a listed arrangement that the setting menu corresponding to the menu item button 116_1 displayed at the uppermost position in the hierarchical menu display area 115 is set as the top-end type setting menu* ***(the setting menu which is first operated)*** *in the hierarchical structure of the hierarchical menu, and the menu item buttons 116_1 to 116_5 corresponding to the lower setting menus* ***(the setting menus which are subsequently operated)*** *are displayed in the hierarchical order downwardly from the menu item button 116_1. The "copy job type" menu item button 116_1 located at the first place (top) out of the menu item buttons 116_1 to 116_5 is displayed in the setting*

*menu display area 110 on the setting frame 11, and it is the menu item corresponding to the type setting menu under operation (whose parameter is currently being set). Therefore, the menu item button 116_1 is displayed so that the right end portion thereof is connected to the setting menu display area 110 adjacent to the right side of the menu item button 116_1 as if it is displayed as a tag of the setting menu display area 110; PARAGRAPHS [0085]-[0088]. Further, the second to fifth menu item buttons 116_2 to 116_5 other than the menu item button 116_1 being set have not been operated until this time, and thus they are the menu items corresponding to the setting menus on which any parameter has not yet been set. Therefore, as indicated by dotted lines of FIG. 4, the non-set menu item buttons 116_2 to 116_5 are displayed in a display style different from that of the menu item button 116_1 being set. Further, no parameter display window is provided in each of the menu item buttons 116_2 to 116_5; PARAGRAPH [0090]. With respect to the display style of the hierarchical structure of the menu items, various display styles such as **numbering of the menu items**, linkage of the menu items with arrows, etc. may be used; PARAGRAPH [0181]. In the operating method according to an aspect of the present invention, the operating device according to another aspect of the present invention and the image processing apparatus according to another aspect of the present invention, the setting on plural items is sequentially carried out in predetermined order, and the plural items are displayed when one of plural setting frames is displayed, **whereby an operator can obtain information as to the place at which the setting frame being displayed is located in the arrangement of the plural items to be sequentially set**. Therefore, the operability can be enhanced; PARAGRAPH [0185])*,

9. the number of conditions corresponding to input buttons for setting conditions *(menu item buttons 116_1-116_4 and setting frames 11-14; FIGS 4-8. The other setting menu out of the five setting menus is a setting menu to which the parameter setting is not necessarily required to*

execute the copying operation (hereinafter referred to as "option setting menu"). Therefore, the setting menu is set as the lowest (least significant) setting menu. It is not provided with the setting frames corresponding to the respective setting frames 11 to 14 for the other setting menus, and the execution of the copying operation can be carried out without operating this setting menu; PARAGRAPH [0144]. Each option setting frame is not provided with any hierarchical menu display area as displayed in the setting frames 11 to 14, however, it may be provided with the same hierarchical menu as the normal setting frames, if necessary; PARAGRAPH [0155].), and

10. wherein performance of the process is started when the number of conditions which have not yet been set reaches 0 *(When the setting of all the parameter values required to carry out the processing operation is completed for the setting menu of each layer contained in the hierarchical menu, the processing operation is started according to the processing type and the operating condition which are specified on the basis of each set parameter value; PARAGRAPH [0005]. **When the parameter setting is completed for all the setting items required to execute the processing operation**, an instruction on the processing operation, for example, an instruction of indicating operating parameters or **an instruction of starting execution of the processing operation is made to the processor through a processing operation instructing unit 43**; PARAGRAPH [0063]. After the four hierarchical setting menus of (1) the copy job type setting menu, (2) the sheet size setting menu, (3) the magnification setting menu and (4) the number-of-copies setting menu are sequentially operated along the hierarchical structure of the hierarchical menu by using the respective setting frames 11 to 14, the setting of the parameters for the processing type and the operating condition which are required to execute the copying operation is finished. Thereafter, the processing start frame is created and the frame to be displayed is shifted to the processing start frame;*

PARAGRAPH [0107]. THUS, ALTHOUGH THE PROCESS IS NOT AUTOMATICALLY OR IMMEDIATELY STARTED AFTER ALL OF THE REQUIRED SETTING CONDITIONS HAVE BEEN SET, THE PROCESS IS NONETHELESS ONLY STARTED WHEN ALL THE REQUIRED CONDITIONS HAVE BEEN SET, OR, IN OTHER WORDS, "when the number of conditions which have not yet been set reaches 0".).

11. MACHIDA fails to explicitly disclose that performance of the process is automatically (or immediately) started when the number of conditions which have not yet been set reaches 0 (i.e., when all of the conditions required to be set have been set).

12. However, YOSHINO, working in the same field of setting operational conditions of an office machine *(TITLE)*, teaches starting performance of a process when all setting conditions are set, in other words, when the number of conditions which have not yet been set reaches 0 *(FIG. 17 shows an automatic start subroutine. Usually, the copier 10 begins a copying operation when the print start key 140 provided on the operation board 102 is pressed. In this particular embodiment, it is also possible for the copier 10 to start a copying operation automatically when modes are fully set up based on the data from the menu sheet reader 62; COL. 13, LINES 51-57.).*

13. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have incorporated an automatic start routine as taught by YOSHINO into MACHIDA'S image processing apparatus menu operating device in order to predictably and advantageously attain a more automated and efficient user friendly image processing apparatus.

14. MACHIDA also fails to explicitly disclose that a numeral indicating the number of conditions which have not yet been set is displayed. However, MACHIDA does **explicitly teach** that the menu items may be numbered (¶ [0181]). Since there are only two possible menu item numbering schemes - (1) numbering in ascending order (counting up) and (2) numbering in descending order (counting own), it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to number the menu items in descending order counting down to zero as a **simple design choice** from among only two possible menu item numbering scheme choices. Furthermore, when numbering in descending order counting down to zero, the menu item number of the menu item currently being set would therefor indicate the number of menu items remaining to be set, *"whereby an operator can obtain information as to the place at which the setting frame being displayed is located in the arrangement of the plural items to be sequentially set"* (¶ [0185] of MACHIDA).

15. **Regarding claims 5-9**, claims 5-9 are rejected for the same reasons applied in the previous Office Actions.

16. **Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over MACHIDA ET AL. (US 2001/0026290, hereinafter MACHIDA).**

17. **Regarding claim 10**, claim 10 has been amended to include the new limitation that *"the notifying information is the number of conditions that have not yet been set, the number of conditions corresponding to input buttons for setting conditions."*

18. MACHIDA discloses that the number of conditions (i.e., the number of conditions required to be set) correspond to the input buttons for setting conditions *(menu item*

buttons 116_1-116_4 and setting frames 11-14; FIGS 4-8. The other setting menu out of the five setting menus is a setting menu to which the parameter setting is not necessarily required to execute the copying operation (hereinafter referred to as "option setting menu"). Therefore, the setting menu is set as the lowest (least significant) setting menu. It is not provided with the setting frames corresponding to the respective setting frames 11 to 14 for the other setting menus, and the execution of the copying operation can be carried out without operating this setting menu; PARAGRAPH [0144].).

19. **Regarding claims 11-15**, claims 11-15 are rejected for the same reasons applied in the previous Office Actions.

Response to Arguments

20. Applicant's arguments filed March 1, 2011 have been fully considered but they are not persuasive.

21. Examiner notes for the record that Applicant's discussion (on pages 6-11 of the REMARKS) of various features of MACHIDA and the claimed invention has been reviewed.

22. With regard to Applicant's arguments, in the second paragraph on page 11 of the REMARKS, Applicant asserts that *Machida does not display a number indicating how many of the required top level values have not been set*, and that *Machida also does not display a number corresponding to the number of buttons which have not been used to set conditions* (page 11, lines 6-9). Furthermore, Applicant also asserts that *one of ordinary skill in the art would have had no reason to add a countdown number to the Machida display to indicate the number of required values/buttons that have not yet been set* (page 11, lines 12-14), and that *the only*

way to find motivation for modifying Machida in this manner is through the improper use of hindsight (page 12, lines 3-4).

23. Examiner respectfully disagrees for the following reasons.

24. Addressing the above-noted arguments in the reverse order of presentation, as applied and explained in the previous Office Actions, MACHIDA explicitly states that the display may include numbering *(For example, in all the embodiments described above, each of the hierarchical menu display areas is located at the left side of the display frame, however, it may be located at any other place. With respect to the display style of the hierarchical structure of the menu items, **various display styles such as numbering of the menu items**, linkage of the menu items with arrows, etc. may be used; PARAGRAPH [0181].)*. Thus, modifying MACHIDA to include a hierarchical menu numbering scheme would in no way amount to improper use of hindsight since such a modification is explicitly suggested by MACHIDA. This fact has been repeatedly noted in the previous Office Actions, but, in Applicant's arguments, Applicant appears to ignore MACHIDA'S explicit suggestion of the use of menu item numbering.

25. As for Applicant's argument that *one of ordinary skill in the art would have had no reason to add a countdown number to the Machida display to indicate the number of required values/buttons that have not yet been set*, it is noted that the features upon which applicant relies (i.e., a countdown number) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

26. However, as explained in the previous Office Actions, per MACHIDA'S explicit suggestion of numbering the menu items, it would have been an obvious design choice to one of ordinary skill in the art to use a counting-down numbering scheme (consider the world-famous televised countdowns of NASA spacecraft launches) as one of only 2 possible counting possibilities, i.e., counting up or counting down. Furthermore, such obvious numbering of the menu items that are required to be set in a countdown order would read on the recited limitations of *displaying notifying information indicating to what degree conditions remain to be set*, *wherein the notifying information is the number of conditions which have not yet been set*, …, *the number being displayed by the display control means.*

27. As for Applicant's assertion that *Machida does not display a number indicating how many of the required top level values have not been set* and/or that *Machida also does not display a number corresponding to the number of buttons which have not been used to set conditions*. Examiner has never stated that MACHIDA explicitly discloses displaying a number corresponding to the number of buttons which have not been used to set conditions. Examiner has merely stated that, given MACHIDA'S explicit suggestion of numbering the menu items of the hierarchical display, the obvious design choice of countdown numbering of the menu items (as one of only two possible numbering possibilities) would, in fact, result in the condition wherein the numeral which displayed on each menu item would correspond to the number of buttons which have not been used to set conditions. Thus, the noted obvious design choice for implementing MACHIDA'S suggested

modification of numbering the menu items meets the claimed limitation of *displaying notifying information indicating to what degree conditions remain to be set*, *wherein the notifying information is the number of conditions which have not yet been set*, …, *the number being displayed by the display control means.*

28. With respect to Applicant's arguments presented in lines 7-14 on page 12 of the REMARKS that MACHIDA does not disclose that *performance of the process is started when the number of conditions which have not yet been set reaches 0*, Examiner notes for the record of that Applicant's argument with respect to this limitation of claim 1 has been considered but are moot in view of the new ground(s) of rejection.

29. Lastly, Applicant argues in lines 14-16 on page 12 of the REMARKS that claims 5-9 depend from claim 1 and are therefore allowable by virtue of their dependency on claim 1.

30. Examiner respectfully disagrees. For the reasons discussed above and in the previous Office Actions, it is Examiner's opinion that claim 1 is not allowable, and therefore, claims 5-9 are also not allowable for at least the reason that they depend on claim 1 as well as for the reasons applied to them individually.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. BRAY (US 4,640,607) discloses when a setup mode is completed and a copier is ready to start a producing mode, the production mode can be effected by pushing a

start button 136, or, alternatively, the copier may be programmed to start automatically after setup and after a predetermined time delay.

33. MEYERS ET AL. (US 6,996,781) discloses a software wizard which presents a series of screens to lead a user through an XLS document authoring process. The wizard includes a progress display 526 which includes a numbered list of the wizard screens in order. Next to each screen is an indicator that changes color as the user reaches that step of the process.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINCENT PEREN whose telephone number is (571) 270-7781. The examiner can normally be reached on Monday-Friday, 10:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHAN PARK, can be reached at 571-272-7409. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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